

REMARKS

The Final Office Action mailed December 9, 2004, has been received and reviewed. Claims 1-15 are currently pending in the application. Claims 1-15 stand rejected. Applicants propose canceling claims 3, 9, and 14. Applicants propose to amend claims 1, 4, 6, 10-13, and 15, and respectfully request reconsideration of the application as proposed to be amended herein.

35 U.S.C. § 102(b) Anticipation RejectionsAnticipation Rejection Based on U.S. Patent No. 6,032,197 to Birdwell et al.

Claims 1-4 and 6-15 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Birdwell et al. (U.S. Patent No. 6,032,197). Applicants respectfully traverse this rejection, as hereinafter set forth.

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Brothers v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Applicants submit that the Birdwell reference does not and cannot anticipate under 35 U.S.C. § 102 the presently claimed invention of presently amended independent claims 1, 6, 10-13, and claims 2-4, 7-9, 14, 15 depending therefrom, because the Birdwell reference does not describe, either expressly or inherently, the identical inventions in as complete detail as are contained in the claims.

The Office Action alleges:

Consider claim 10, Birdwell teaches a wireless system comprising means for generating a transmission frame (Birdwell see especially col 2, lines 13-32, col 6, lines 52-58); determining a header for the transmission frame (Birdwell see especially col 4, lines 16-33), ***compressing the header using a first format (Birdwell see especially col 4, lines 42-54), and periodically generating at least one parameter of the first format (Birdwell see especially col 5, line 66-col 6, line 10).***

As to claim 1, the system of Birdwell as applied to claim 10 would perform the claimed steps.

As to claims 2, 7, note that Birdwell's system is a uni-directional broadcast system (Birdwell see especially col 3, line 62-col 4, line 6).

As to claims 3, 9, 14, 15, note that the parameter is interleaved, i.e. transmitted periodically between broadcast content (Birdwell see especially col 5, line 59-col 6, line 10). (Office Action, p. 2; emphasis added).

Applicants respectfully disagree that the Birdwell reference anticipates Applicants' invention as claimed in exemplary amended independent claim 1 which reads:

1. In a wireless communication system supporting a uni-directional transmission, a method comprising:
generating a payload transmission frame;
determining a header for the payload transmission frame;
compressing the header using a first format; and
placing at least one parameter for the first format in a decompression information segment, the at least one parameter configured to initialize decompression of the header and at least a subsequent header of a subsequent payload transmission frame, wherein the decompression information segment is independent from any payload transmission frame, and the *decompression information segment is* queued for transmission on the same channel as the payload transmission frame *and regularly interleaved between broadcast content comprising a plurality of compressed headers and payload frames in a broadcast stream.*
(Emphasis added.)

Compressing the Header Using a First Format

Applicant's claimed invention is drawn to "compressing the header using a first format" which is in contrast to Birdwell's disclosure of a packet-by-packet process wherein "Compression is achieved by removing the non-changing header fields from the compressed header" (col. 5, lines 36-38). In Birdwell, "compression" is achieved by omission rather than by "using a first format", as claimed by Applicants.

Initialized Decompression of the Header and at Least a Subsequent Header

Additionally, Applicants claimed invention is drawn to "placing at least one parameter for the first format in a compression information segment, the at least one parameter configured to initialize decompression of the header and at least a subsequent header of a subsequent payload

transmission frame” which is in contrast to Birdwell’s disclosure of a packet-by-packet process wherein:

The packet encoder 34 (FIG. 2) **appends a compression key 54 to each packet**, regardless of whether the packet is full-length or reduced length. As shown in FIGS. 4 and 5, the **compression key 54** has a compression bit value 56 and **a header index valued 58**. (col. 5, line 66-col. 6, line 3; emphasis added).

The **header index value 58 references a memory location** at the destination client. More particularly, the header index value 58 is used to reference an entry in a header table at the destination client. If the header index value 58 belongs to the full-length data packet 50, the header index value designates an entry in the header table for storing the uncompressed header 40. On the other hand, **if the header index value 58 belongs to the reduce-length data packet 60, the header index value designates an entry in the header table that stores (or will store) the associated uncompressed header 40 from which the compressed header 62 is derived**. (col. 6, lines 10-21; emphasis added).

In Birdwell, a “header index” is appended to each packet and the header index is necessary to “derive” the header for each data packet. Therefore, according to the disclosure of Birdwell, a header index is essential for each packet in order to derive or regenerate the header for each packet. In contrast, Applicants’ invention as claimed, is drawn to “the at least one parameter configured ***to initialize decompression of the header and at least a subsequent header*** of a subsequent payload transmission frame”.

Decompression Information Segment . . . Regularly Interleaved

Additionally, Applicants claimed invention is drawn to “wherein the decompression information segment is . . . ***regularly interleaved between broadcast content comprising a plurality of compressed headers and payload frames in a broadcast stream***” which is in contrast to Birdwell’s disclosure of a packet-by-packet process wherein:

The packet encoder 34 (FIG. 2) **appends a compression key 54 to each packet**,. . . (col. 5, lines 66-67; emphasis added).

In Birdwell, a “compression key” is appended to **each** packet and one of the Birdwell compression keys cannot be used to span, through key generation or otherwise, a plurality of packets. Specifically, Birdwell’s disclosure does not teach “regularly interleaved between

broadcast content comprising a plurality of compressed headers and payload frames in a broadcast stream” as claimed by Applicants.

Applicants other amended independent claims include similar elements/steps as described hereinabove. Specifically, amended independent claims 6, 10, 11-13 recite:

6. In a wireless communication system supporting a uni-directional transmission, a method comprising:
 - receiving a payload transmission frame, the payload transmission frame having a header compressed using a first format;
 - receiving at least one parameter describing the first format in a decompression information segment, the at least one parameter configured to initialize decompression of the header and at least a subsequent header of a subsequent payload transmission frame, wherein the decompression information segment is independent from any payload transmission frame, and the decompression information segment is received on the same channel as the payload transmission frame and regularly interleaved between broadcast content comprising a plurality of compressed headers and payload frames in a broadcast stream; and
 - decompressing the payload transmission frame using the first format.
10. In a wireless communication system supporting a uni-directional transmission, an infrastructure element, comprising:
 - means for generating a payload transmission frame;
 - means for determining a header for the payload transmission frame;
 - means for compressing the header using a first format; and
 - means for placing at least one parameter for the first format in a decompression information segment, the at least one parameter configured to initialize decompression of the header and at least a subsequent header of a subsequent payload transmission frame, wherein the decompression information segment is independent from any payload transmission frame, and the decompression information segment is queued for transmission on the same channel as the payload transmission frame and regularly interleaved between broadcast content comprising a plurality of compressed headers and payload frames in a broadcast stream.
11. In a wireless communication system supporting a uni-directional transmission, a wireless apparatus comprising:

- means for receiving a payload transmission frame, the payload transmission frame having a header compressed using a first format;
- means for receiving at least one parameter describing the first format in a decompression information segment, the at least one parameter configured to initialize decompression of the header and at least a subsequent header of a subsequent payload transmission frame, wherein the decompression information segment is independent from any payload transmission frame, and the decompression information segment is received on the same channel as the payload transmission frame and regularly interleaved between broadcast content comprising a plurality of compressed headers and payload frames in a broadcast stream; and
- means for decompressing the payload transmission frame using the first format.
12. A digital signal storage device, comprising:
- first set of instructions for receiving a payload transmission frame, the payload transmission frame having a header compressed using a first format;
 - second set of instructions for receiving at least one parameter describing the first format in a decompression information segment, the at least one parameter configured to initialize decompression of the header and at least a subsequent header of a subsequent payload transmission frame, wherein the decompression information segment is independent from any payload transmission frame, and the decompression information segment is received on the same channel as the payload transmission frame and regularly interleaved between broadcast content comprising a plurality of compressed headers and payload frames in a broadcast stream; and
 - third set of instructions for decompressing the payload transmission frame using the first format.
13. A communication signal transmitted on a carrier wave, comprising:
- a broadcast content portion comprising a plurality of transmission frames, each of the plurality of transmission frames having a compressed header; and
 - a header protocol information portion regularly interleaved between broadcast content in a broadcast stream, the broadcast content comprising a plurality of transmission frames each having a compressed header, wherein the header protocol information portion includes information configured to initialize decompression of at least one of the compressed headers and a subsequent one of the compressed headers of the plurality of transmission frames.

Therefore, amended independent claims 1, 6, 10, 11-13, and dependent claims 2, 4, 7, 8, and 15, are not anticipated by the Birdwell reference under 35 U.S.C. § 102. Accordingly, such

claims are allowable over the cited prior art and Applicants respectfully request that such rejections be withdrawn.

Anticipation Rejection Based on “Robust Header Compression (ROHC): Framework and four profiles: RTP, UDP, ESP” Internet Engineering Task Force IETF Draft to Bormann

Claims 1, 2, 4-8, 10, 11 and 13 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Bormann (“Robust Header Compression (ROHC): Framework and four profiles: RTP, UDP, ESP” Internet Engineering Task Force IETF Draft). Applicants respectfully traverse this rejection, as hereinafter set forth.

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Brothers v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Applicants submit that the Bormann reference does not and cannot anticipate under 35 U.S.C. § 102 the presently claimed invention of presently amended independent claims 1, 2, 4-8, 10, 11 and 13 because the Bormann reference does not describe, either expressly or inherently, the identical inventions *in as complete detail as are contained in the claims*.

The Office Action alleges:

Consider claim 10, Bormann teaches a wireless system comprising means for[:]
generating a transmission frame (Bormann see especially sections 1.2, pages 6-9),
determining a header for the transmission frame,
compressing the header using a first format, and
periodically generating at least one parameter of the first format (Bormann
see especially section 4.2, 4.3, pages 18-19). (Office Action, p. 3;
emphasis added).

Applicants respectfully disagree that the Bormann reference anticipates Applicants’ invention as claimed in the amended independent claims. The Office Action cites sections 1.2, 4.2 and 4.3 of the Bormann reference for disclosing Applicants’ claim elements, however, the cited reference does not disclose in as complete details Applicants’ invention as exemplary claimed in amended independent claims 1, 6, 10, 11, and 13 as listed above. Applicants concede

that the Bormann reference uses the words “header compression”, etc., however, the Bormann reference does not appear, for example, to disclose, as claimed in Applicants’ amended independent claim 1:

In a wireless communication system supporting a uni-directional transmission, a method comprising:

generating a payload transmission frame;
determining a header for the payload transmission frame;
compressing the header using a first format; and
placing at least one parameter for the first format in a decompression information segment, the at least one parameter configured to initialize decompression of the header and at least a subsequent header of a subsequent payload transmission frame, wherein the decompression information segment is independent from any payload transmission frame, and the ***decompression information segment is*** queued for transmission on the same channel as the payload transmission frame ***and regularly interleaved between broadcast content comprising a plurality of compressed headers and payload frames in a broadcast stream.***
(Emphasis added.)

In contrast, the Bormann reference relies upon positive feedback from the decompressor as the compressor and decompressor ascend through various states of synchronicity by exchanging acknowledgements. In distinct contrast, Applicants’ invention as claimed includes “***placing at least one parameter for the first format in a decompression information segment, the at least one parameter configured to initialize decompression of the header and at least a subsequent header of a subsequent payload transmission frame,*** wherein the decompression information segment is independent from any payload transmission frame, and the ***decompression information segment is*** queued for transmission on the same channel as the payload transmission frame ***and regularly interleaved between broadcast content comprising a plurality of compressed headers and payload frames in a broadcast stream.***”

Applicants’ amended independent claims 1, 6, 10, 11, and 13 contain similar elements/steps. Therefore, amended independent claims 1, 6, 10, 11, and 13, and dependent claims 2, 4, 5, 7, and 8, are not anticipated by the Bormann reference under 35 U.S.C. § 102. Accordingly, such claims are allowable over the cited prior art and Applicants respectfully request that such rejections be withdrawn.

ENTRY OF AMENDMENTS

Applicants propose to cancel claims 3, 9, and 14. The proposed amendments to claims 1, 4, 6, 10, 11, 12, 13, and 15 above should be entered by the Examiner because the amendments are supported by the as-filed specification and drawings and do not add any new matter to the application. Further, the amendments do not raise new issues or require a further search. Finally, if the Examiner determines that the amendments do not place the application in condition for allowance, entry is respectfully requested upon filing of a Notice of Appeal herein.

REQUEST FOR ALLOWANCE

In view of the foregoing, Applicants submit that claims 1, 2, 4-8, 10-13, and 15 are believed to be in condition for allowance, and an early notice thereof is respectfully solicited. Accordingly, reconsideration and allowance of this application are earnestly solicited. Should any issues remain unresolved, the Examiner is encouraged to telephone the undersigned at the number provided below.

Respectfully submitted,

Dated: March 9, 2005

By: Roberta A. Young
Roberta A. Young, Reg. No. 53,818
(858) 658-5803

QUALCOMM Incorporated
5775 Morehouse Drive
San Diego, California 92121
Telephone: (858) 658-5787
Facsimile: (858) 658-2502